

CLAIM AMENDMENTS

1 1. (currently amended) A heat-insulating [[layer]]
2 material with a melting point above 2500°C, a thermal expansion
3 coefficient in excess of 8×10^{-6} K⁻¹, and a sintering temperature
4 greater than 1400°C, wherein the heat-insulating material has a
5 perovskite structure of the general formula $A_{1+r}(B'^{1/3+x}B''^{2/3+y})O_{3+z}$ in
6 which:

7 A = at least one element of the group (Ba, Sr, Ca, Be),
8 B' = at least one element of the group (Mg, Ca, Sr, Ba,
9 Be),

10 B'' = at least one element of the group (Ta, Nb),
11 r, x, and z ≠ 0, and

12 $-0.1 < r, x, y, z < 0.1$;

13 or the heat-insulating material has the perovskite
14 structure of the general formula $A_{1+r}(B'^{1/2+x}B''^{1/2+y})O_{3+z}$ in which:

15 A = at least one element of the group (Ba, Sr, Ca, Be),

16 B' = at least one element of the group (Al, La, Nd, Gd,
17 Er, Lu, Dy, Tb),

18 B'' = at least one element of the group (Ta, Nb), and
19 $-0.1 < r, x, y, z < 0.1$.

1 2. (currently amended) A heat-insulating material
2 according to claim 1 wherein the heat-insulating material has a
3 composition wherein the perovskite structure of the general
4 formula $A_{1+r}(B'^{1/2+x}B''^{1/2+y})O_{3+z}$ and $r = x = y = z = 0$.

3. (canceled)

1 4. (currently amended) The use of A method of using
2 the heat-insulating material according to claim 1 comprising the
3 step of applying the heat-insulating material as a heat-insulating
4 coating on the surface of [[the]] a component.

1 5. (previously presented) The [[use]] method according
2 to claim 4, further comprising the step of providing, between the
3 component and the heat-insulating component, one or more
4 intermediate coatings of ceramic glass or metallic material.

1 6. (previously presented) The [[use]] method according
2 to the preceding claim 5, further comprising the step of
3 providing, between the component and the heat-insulating layer, an
4 intermediate layer comprised of a MCrAlY alloy where M = Co, Ni.

5 7. (currently amended) The [[use]] method according to
6 the preceding claim 5, further comprising the step of providing,
7 between the component and the heat-insulating layer, an
8 intermediate (platinum-) aluminide layer.

9 8 - 10. (canceled)